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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,987	08/23/2001	Christoph Schnitter	Mo-6430/STA-168	1536

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EXAMINER
HA, NGUYEN T

ART UNIT	PAPER NUMBER
2831	

DATE MAILED: 09/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/935,987	SCHNITTER ET AL.	
	Examiner	Art Unit	
	Nguyen T Ha	2831	

-- The MAILING DATE of this communication appears on the c ver sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 May 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *9* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 5/29/2003 have been fully considered but they are not persuasive.

The applicant argued as the follow:

a) File disclosed a niobium suboxide core, but not a niobium metal core.

b) File does not disclosed a conducting niobium suboxide layer,

c) File does not disclose a dielectric barrier layer comprising niobium pentoxide.

The examiner disagreed with the applicant as the following:

File disclosed an anode comprising a valve metal oxide made of niobium oxide (column 2 lines 10-11). The examiner agues that a niobium oxide is a niobium metal core.

Fife disclosed a niobium suboxide layer (column 4 lines 50-54).

Fife disclosed a niobium pentoxide (Nb_2O_5) (column 2 lines 16-18). The examiner takes official notice that niobium pentoxide (Nb_2O_5) can be used as a dielectric barrier layer.

The examiner respectfully submits that such the argument is not persuasive. Therefore, the examiner will take it as a FINAL rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1&8 are rejected under 35 U.S.C. 102(e) as being anticipated by Fife (6,322,912).

Regarding claim 1, Fife discloses an anode comprising a niobium metal core (column 2 lines 10-11), a conducting niobium suboxide layer or NbO (column 4 lines 50-54) and a dielectric barrier layer comprising niobium pentoxide or Ni_2O_5 (column 2 lines 16-18).

Regarding claim 8, Fife discloses a capacitor comprising an anode wherein an anode comprises a niobium metal core (column 2 lines 10-11), a conducting niobium suboxide layer or NbO (column 4 lines 50-54) and a dielectric barrier layer comprising niobium pentoxide or Ni_2O_5 (column 2 lines 16-18).

4. Claim 4 is rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida et al (6,215,652).

Regarding claims 4, Yoshida discloses comprising sintering niobium metal powders (13) and electrolytically producing a dielectric barrier layer (16) on a surface of a sintered body. It is inherent that the electrolytic capacitor comprising an aqueous solution of organic acid containing an anion.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fife (6,322,912) in view of Loffelholz et al (6,136,062).

Regarding claim 2, Fife discloses all the limitations discussed above with respect to claim 1, except for the anode wherein the anode has a tantalum content in the dielectric barrier layer ranging from about 1500 to about 12000 ppm, relative to the anode. However, Loffelholz et al teaches the anode comprising a tantalum content from 1000 to 12000 ppm (column 6 line 16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Fife anode as taught by Loffelholz to have the tantalum content for the anode from 1000 to 12000 ppm in order to use under high temperature and reduce the current leakage.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al (6,215,652) in view of Loffelholz et al (6,136,062).

Regarding claim 5, Yoshida discloses all the limitations discussed above with respect to claim 4, except for an electrolyte comprises a tantalum oxalate solution. However, Loffelholz et al teaches tantalum oxalate solution (column 6 lines 16-18). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Yoshida as taught by Loffelholz to have the tantalum oxalate solution in the electrolyte capacitor in order to use under high temperature with less leakage current.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fife (6,322,912).

Regarding claim 3, Fife discloses all the limitation discussed above with respect to claim 1, except for the anode wherein the suboxide layer has a thickness that is at least about 50 nm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the anode wherein the suboxide layer has a thickness that is at least about 50 nm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. **In re Boesch, 617, F.2d 272, 205 USPQ 215 (CCPA 1980).**

9. Claims 6&7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al (6,215,652).

Regarding claims 6&7, the teaching of Yoshida includes all the limitations discussed above in claim 4, except for the electrolyte has a conductivity ranging from about 0.15 to about 25 mS/cm or electrolyte is at least about 5 mS/cm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the electrolyte has a conductivity ranging from about 0.15 to about 25 mS/cm or

electrolyte is at least about 5 mS/cm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. **In re Aller, 105 USPQ 233.**

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T Ha whose telephone number is 703-308-6023. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 703-308-3682. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

NH
August 21, 2003

ANTHONY DINKINS
PRIMARY EXAMINER